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Record and Document Management System (RMS) Guidelines: Issue A

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Prepared by Sandia National Laboratories Albuquerque, New Mexico 87185 and Livermore, California 94550

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RMS Guidelines: Issue A

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Record and Document Management System (RMS) Guidelines: Issue A

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Abstract

RMS Guidelines defines the processes and conventions to manage both records and documents for the ASCI Verification and Validation Program at Sandia National Laboratories, employing the ASCI V&V RMS application. It is the definitive source for all information regarding the creation, submittal, use, maintenance, and disposition of records and documents. This document is also used as evidence of meeting records management requirements as stated in DOE Order 414.1A, Quality Assurance, and Sandia National Laboratories Corporate Technical Business Practice TBP-500, Records Management.

RMS Guidelines: Issue A

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RMS Guidelines

1. Introduction

RMS (Record and Document Management System) is the official record and document management system for ASCI Verification and Validation (V&V) information to:

- Protect, preserve, and control records and documents
- Share information
- Search and retrieve information
- Meet corporate records management requirements

RMS combines a web-based application, a corporate-maintained file repository (Web FileShare), and records management processes to form a powerful resource for managing ASCI V&V records and documents. RMS can be thought of as a *Release To* application, where records/documents are released to RMS for publication and distribution purposes.

The current RMS application addresses only unclassified information. Records/documents are described with metadata, enabling search and retrieval activities as well as records management processes. Currently RMS has limited capabilities for traceability and relationships amongst records/documents.

2. Purpose of RMS Guidelines

RMS Guidelines defines the processes and conventions to manage both records and documents for the ASCI Verification and Validation Program at Sandia National Laboratories, employing the ASCI V&V RMS application. It is the definitive source for all information regarding the creation, submittal, use, maintenance, and disposition of records and documents. This document is updated on an as-needed basis to reflect changes in RMS processes and conventions.

This document is also used as evidence of meeting records management requirements as stated in DOE Order 414.1A, *Quality Assurance*, and Sandia National Laboratories Corporate Technical Business Practice TBP-500, *Records Management*.

RMS Guidelines serves as the single source of information from which other files are created; such as, the RMS application help files and training materials.

RMS Guidelines does not address specific RMS software functions, the corporate web server or network (such as Sandia Restricted Network—SRN) issues, or Web FileShare functionality. Neither does it address future planned capabilities, such as classified information and traceability amongst records/documents.

The primary audience for this document is RMS librarians.

3. Maintenance of RMS Guidelines

This document is managed using a corporate-maintained configuration management tool, *Version Manager* (VM). The RMS librarian has authorized access to VM. *RMS Guidelines* is maintained in the VM directory VMProj\PEARLS\RMS\Docs\ with RMS Guidelines.doc as the file name.

Revisions of this document are periodically released to the RMS from VM.

The RMS librarian is responsible for the content, maintenance, and publication of RMS Guidelines.

4. Points of Contact

The main point of contact for RMS is Chris Northrop-Salazar, RMS librarian.

Table 1: RMS Points of Contact.

Name	Role	Phone No.	Email
Marty Pilch, 9133	ASCI V&V Manager	845-3047	mpilch
Ann L. Hodges, 6536	Project Co-lead	844-6284	alhodge
Gary K. Froehlich, 6536	Project Co-lead	284-3930	gkfroeh
Shelley M. Eaton, 6536	Project Technical Lead	844-2665	smeaton
Donald L. Moore, 6536	Designer, Developer	844-7610	dlmoore
Larry Claussen, 6536	Developer	845-9054	lmclaus
Mar McCornack, 6536	Configuration Manager	845-8719	mtmccor
Crystal Stein, 9329	Web Server Administrator	284-4554	cstein
Christine L. Northrop-Salazar, 9103	RMS Librarian	284-4613	csalaz
	Records Manager		

5. Roles and Responsibilities

Roles and responsibilities are documented throughout this document, organized by topic. Table 2 below summarizes this information by role.

Table 2: Roles and Responsibilities.

Role	Responsibility
RMS Librarian	Grants access to the collaborative directory
	Maintains paper and electronic records in RMS
	Checks in new and modified records/documents to RMS
	Checks out records/documents for modification from RMS
	Gathers metadata from submitters and ensures that descriptions are as consistent and accurate as possible, following the rules in the RMS Guidelines document
	Updates metadata
	Assists administrative and technical staff with records management activities
	Creates and maintains RMS access control groups, including group membership
	Maintains RMS Guidelines document
	Defines RMS processes and conventions
	Determines document type as Record or Document
	Analyzes feasibility for conversion from paper to electronic format
	Converts records/documents from paper to electronic format
	Trains RMS submitters and users
	Notifies submitter after a record/document has been successfully checked in to RMS
	Manages the ascirms email entity account
Record/Document Submitter	Provides complete, accurate, and timely information to the RMS librarian for the submission of records/documents
	Follows document creation recommendations
ASCI V&V management and RMS Librarian	Determines what records/documents shall be submitted to RMS
ASCI V&V management and record/document owner	Defines and is accouantable for RMS access control groups, their memberships, and what records shall be controlled by what access control groups
Dept. 6536 PEARLS Team	Maintains the RMS application

6. RMS Application

The RMS application is maintained on Sandia's corporate server, WS23SNLW2, and is accessible on Sandia's SRN at https://msprod.sandia.gov.

From the RMS home page, the user can:

- Submit records/documents to the RMS librarian for processing
- Search and retrieve records/documents using broad- and narrow-definition keywords
- View context-sensitive help on the User Submittal Form and Attribute Search screen
- Access RMS record and document management processes help aids
- Communicate with the RMS librarian via email
- Find links to other ASCI-related web sites

The RMS collaborative directory is the approved location to temporarily store submitted records/documents to RMS. The RMS librarian reviews the submittals for consistency, completeness, and accuracy; and then the RMS librarian checks in the submitted record/document to RMS, once all RMS process requirements are met. The RMS collaborative directory is located on the SRN at My Network Places\Entire Network\Microsoft Windows Network\Csu880\Csu880\cs

The RMS Librarian Submittal Form is also located on the SRN and is accessible at https://rmsprod.sandia.gov/html/RMSLibrarianEntry.html. This is the web-based form that is used only by the RMS librarian to check in records/documents via the WFS batch-loading capability.

When performing RMS records management activities, the RMS librarian uses the *ascirms* entity account instead of the librarian's personal account. By using this entity account, it is possible for more than one librarian to process records/documents in WFS. Currently the RMS librarian and the RMS technical lead have responsibility for safekeeping the entity account password, allowing only librarians and RMS technical staff access to the password.

RMS uses the corporate Web FileShare application as the record/document repository. WFS is also located on Sandia's SRN and is accessible at https://wfsprod01.sandia.gov/.

The definitions of the topic and attribute searches are contained in RMSTopicSearchDefinitions.xls in VM: PEARLS\RMS\Docs.

RMS users can communicate with the RMS librarian(s) via the *ascirms* email entity account. The email address is <u>ascirms@sandia.gov</u>, which is accessible through any mail tool or through the *Contact Librarian* button on the RMS Home Page.

7. Information to be Managed by RMS

Information that is managed by RMS includes ASCI Verification and Validation records and documents, specifically:

- Information generated by Sandia National Laboratories
- Copies of records/documents generated by external entities
- Work products that the author(s) or owner(s) are ready to share with others or control using RMS
- Work products that are either administrative or technical in nature
- Work products both internal and external to Sandia National Laboratories
- Unclassified information only
- Reports, plans, correspondence, presentations, and summary types of information
- Electronic information
- Paper information, only if electronic versions are not feasible to create and maintain

Data that are currently inappropriate to be managed by RMS include:

- Executables
- Classified information
- Codes
- Test data
- Personal data

8. RMS and Configuration Management

RMS can be thought of as a *Release To* tool. Records checked in to RMS shall be managed according to records management conventions as noted in this document, which follows Sandia's Recorded Information Management requirements. In addition, non-records (or documents) are managed in RMS for the purpose of sharing and distributing information.

Version control, on the other hand, helps the author manage changes to the files during creation or modification, ensuring that the files are backed up and history is preserved. Versions or iterations of these files can be controlled by any of the following:

- Version control tool
- Configuration management tool
- Desktop computer storage

Records/documents are released to RMS from the configuration management tool when the information is ready to share with others or to be published, either in Draft or Final Status. An author may create many iterations of the record/document in the configuration management tool before publishing or releasing it to RMS.

9. RMS Records and Documents

RMS manages both records and documents. All documented material initially submitted to RMS are documents; however, some will be elevated to Record status when processed by the RMS librarian. To distinguish between the two, the RMS librarian shall assign the appropriate keyword for each record/document checked in to RMS: Document Type = Record (DT=R) or Document Type = Document (DT=D). The distinction between records and documents is crucial for disposition and deletion processes.

According to Sandia's Records Information Management (RIM), "...records document the results of Sandia's research projects and facilitate the administrative processes that allow the company to function. Documents or "non-record material are those items that have no evidentiary or documentary value and may be disposed of when no longer useful..."

The RMS librarian shall work with the submitter to determine the proper designation, and the RMS librarian shall make the final determination.

Examples of Document Type = Document include empty templates or forms, as well as drafts. Of course when any or all of the document types are used for other work, such as assessment training, then the Document Type will change from Document (DT=D) to Record (DT=R).

When the Document Type changes from *Document* to *Record*, the reason for the change shall be documented in the Description/Comments field.

10. Draft vs. Final Status for Records and Documents

As a general rule, *documents* can have the Status of either Draft or Final; *records* can only have the Status of Final, but not Draft. There are exceptions, however. When a *document* with Draft Status has been reviewed or referenced during an event or while creating another *record*, the result may be a change of Document Type to Record (DT=R) while maintaining the Status of Draft.

If the Status of a *document* changes, the RMS librarian shall modify the metadata in RMS to reflect that change.

11. Electronic vs. Paper

RMS is an electronic records and document management system; therefore, submittal of the records/documents in electronic form is the preferred method. However, there are occasions when it is not feasible to submit and maintain records/documents in electronic format. When an RMS record is maintained in paper format, its physical location shall be documented in the URL/Location field in RMS.

All paper records/documents are candidates for conversion to electronic media. The main consideration is a loss or compromise of the record/document's meaning or content during the conversion. If any meaning or content is lost, then the record/document shall not be converted to electronic media. If meaning is not lost, then the record/document shall be converted to electronic media. Examples of records/documents that shall remain in paper format include:

- Embossed seal that won't reproduce
- Complex color publication

The RMS librarian is responsible for analyzing each record/document and, if appropriate, converting it to electronic media.

For records management retention purposes, two pieces of information are needed for each record. For paper-based records, the two parts of the record are the paper file and its associated metadata. For electronic-based records, the two pieces of needed information are the electronic alternate file (usually the PDF version) and its associated metadata. This is shown in the Table 3 below.

Table 3. Paper an	d Electronic Recor	d Elements for	Check In to RMS.

RMS Element	Electronic Records	Paper Records	Record Copy?	Submitted File Name
Primary file (native application)	Optional	n/a	No	Preserved
Alternate file (PDF, RTF, ASCII)	Required	n/a	Yes	Automatically assigned
Metadata (attributes)	Required	Required	n/a	n/a
Paper file	n/a	Required	Yes	n/a

12. File Formats and Media Types

Electronic records/documents with any file format can be managed in RMS. However, the Web FileShare repository employed by RMS has additional features, such as automatically creating thumbnails and PDF files, for the following formats: MS Word, MS Excel, MS PowerPoint, RTF, HTML, PDF, and ASCII.

13. Access Controls

Access controls are employed during submittal, check in, checkout, maintenance, and retrieval of RMS records/documents. In addition to the access restriction applied to SRN (Sandia Restricted Network) applications, the access controls inherent in the corporate maintained MetaGroup Utility and Web FileShare capabilities are also used for controlling access in RMS.

Access Control Rules

- V&V records/documents and their associated metadata are viewable only by individuals belonging to the record/document's assigned access control group(s), as shown in Table 4)
- An individual's membership to ASCI V&V RMS MetaGroups is based on need to know
- Peer-review generated records/documents are typically assigned to the asci-rms-m MetaGroup

Table 4: ASCI V&V RMS MetaGroups.

Access Control MetaGroup	MetaGroup Description	MetaGroup Usage	Controlled Area
wg-asci-rms-admin	Application administrators	ASCI V&V RMS application administrator	WFS repository
wg-asci-rms-c	Collaborative directory users	Submitters of electronic files to RMS collaborative directory	Collaborative Directory
wg-asci-rms-cadmin	Collaborative directory administrators	Reserved for the ASCI RMS librarian(s); grants librarian access to individual user subfolders in order to process submittals	Collaborative Directory
wg-asci-rms-i	Implementation team	RMS application implementation and maintenance staff	WFS repository
wg-asci-rms-m	Management	ASCI V&V management and other authorized personnel	WFS repository
wg-asci-rms-vandv	General V&V users	RMS submitters and information retrievers	WFS repository

Areas and Levels of Access Control

Access control is applied at different levels in RMS: at the repository/directory level and at the individual record/document level. At the repository/directory level, MetaGroups are used for controlling access to the RMS collaborative directory, as well as the repository where RMS records/documents reside in WFS.

The RMS collaborative directory is the approved location to temporarily store submitted records/documents until the RMS librarian performs quality checks and checks in the

record/document to RMS. Different access controls are employed at both the collaborative directory level and subdirectory level. At the collaborative directory level, the *wg-asci-rms-c* MetaGroup defines access to the top-level directory; while each subdirectory allows access only to the individual submitter, *wg-asci-rms-cadmin*, *idoc* (WFS' batchload), and the server's system administrator.

Once the records/documents are processed by the RMS librarian and checked in to WFS, other MetaGroups control access to checked-in records/documents. The default MetaGroup assigned to every checked-in record/document is *wg-asci-rms-vandv*. If tighter control is needed, then one or more other MetaGroups shall be designated.

Access Control Administration

The V&V manager defines access control groups and is accountable for access control of the records/documents in RMS. The RMS librarian administers the ASCI V&V RMS access control groups (MetaGroups) for the ASCI V&V manager. The V&V manager has designated the RMS librarian as the MetaGroup Utility owner for each of the access control groups. The V&V manager is the alternate.

SNL's MetaGroup Utility dictates defined roles and privileges (Table 5). For the most current MetaGroup Utility capabilities and standards, refer to the application's on-line help files located at https://metagroup.sandia.gov/cgi_bin/metagroup.pl. The MetaGroup Utility application accesses the Network Database (NWIS) for account information, which enables non-traditional accounts to be available, such as the *ascirms* entity account.

The RMS librarian and the V&V manager will periodically review the access control groups and their memberships in order to ensure that the existence of each group is necessary and that group membership consists of only those individuals with need to know. The MetaGroup Utility policy at this publication date states that a review shall be completed at least every six months. The review date and reviewer is documented within the utility. MetaGroup owner(s) and delegate(s) will be notified by email if this is not done within the required timeframe.

New access control groups can be created, and existing group membership can be modified or members deleted upon request by management and staff. The ASCI V&V manager and the data owner are responsible and accountable for access control group definition and group membership. The RMS Librarian administers the access control groups, using the corporate MetaGroup Utility application. Table 5 provides a summary of roles and responsibilities of the access control group membership process. Access control requests shall be documented.

Table 5: ASCI V&V RMS Metagroup Utility Roles and Privileges.

MetaGroup Utility Role	Privileges
Owner	Can activate and inactivate a metagroup.
	Can delete a metagroup.
	Can modify a metagroup description.
	Can add or remove Delegates to a metagroup.
·	Can reassign group ownership of a metagroup to another person.
	Has all privileges of a Non-Delegate and Non-Owner, as well as all privileges of a
	Delegate (see below).
Delegate	Has all privileges of a Non-Delegate/ Non-Owner (see below).
	Can add or remove individual members.
	Can add, edit, or remove subgroups.
	Can mark the group as having been officially reviewed.
Non-Delegate and	View the expanded list of group members.
Non-Owner	Email the group owner and delegates.
	Return to the list of known metagroups.

Access control requests usually take 24 hours to complete. Yet, turnaround time is dependent upon several factors, such as the complexity of the request, MetaGroup Utility functionality, and management availability.

14. Quality Control

Upon request by the RMS librarian, the WFS staff generates reports used for quality control. This report contains RMS record/document descriptive information in spreadsheet format and is used by the RMS librarian to review and compare record/document metadata for consistency and accuracy.

15. RMS Processes

Set Up Process

After a new RMS user has contacted the RMS librarian to begin submitting records and documents to RMS, the RMS librarian shall do the following:

1. Modify the wg-asci-rms-c MetaGroup membership to include the new submitter

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- 2. Create a subdirectory within the RMS collaborative directory for the individual. The subdirectory is named using the individual's userid; for example, mpilch for Marty Pilch
- 3. Appropriate access controls shall be applied to the new subdirectory, as specified in the Access Control section
- 4. Train the new user of RMS

Submittal Process

A new or modified record/document shall be submitted to RMS by the author or originator when it is ready to be shared with others or published.

To manage records/documents in RMS, the author, originator, or owner shall submit the file or paper document along with descriptive information to the RMS librarian. There are two methods available to accomplish this.

Method A: Contact the Librarian

 The RMS librarian can work directly with the RMS submitter to manage records/documents.

Method B: Complete User Submittal Form

- If electronic, the file is copied or moved into the submitter's subdirectory in the collaborative directory
- If paper, the file is physically transferred to the RMS librarian
- Descriptive information about the electronic file or the paper document is entered in the RMS User Submittal Form, accessible from the RMS Home Page, and is submitted to the RMS librarian
- The submitter contacts the RMS librarian via the *ascirms* email account with the information that a submittal has been made

An editable version of the file shall be submitted to the RMS librarian if possible. If the file is not a Microsoft Office product, a viewable version, such as PDF or HTML, shall be submitted. File format options include the following:

- 1. Native file format if it is Word, Excel, or other Microsoft product
- 2. Native file format and PDF if the native file is not a Microsoft product
- 3. PDF only
- 4. The RMS librarian shall be consulted for other file formats

When describing a record/document to be managed in RMS, the submitter shall consider information contained in the file name, directory, and subdirectory names in order to accurately and completely describe the record/document.

Example: GOMA\Plans\PeerReview.doc

If there are numerous records/documents to be submitted to RMS, the priorities for submission are:

- 1. Project management, peer review, and software quality records/documents
- 2. Most recently created records/documents
- 3. Previous fiscal year records/documents by most recent first or most often used

Check-in Process

Upon receipt of a submitted record/document, the RMS librarian shall:

- 1. View the submitted file or the paper document
- 2. Retrieve the file's corresponding completed User Submittal Form
- 3. Conduct a search to see if that record/document already exists in RMS. If it does, the RMS librarian shall determine if it is a duplicate record/document or another version of a checked-in record/document. One of the following actions shall be taken by the RMS librarian:
 - If the record/document is a duplicate, the record/document will be discarded and the original record/document left in place
 - If the record/document is a later version, the record/document will be checked out and a new version checked in
 - If the record/document is an earlier version, another record shall be created with a reference to the later version in the Title
- 4. When a duplicate record is submitted that contains both the native file and a pdf file and the original version contains only a pdf version, a new revision of the record/document shall be checked in to RMS that contains both the native and the pdf versions. A duplicate record/document is determined by the RMS librarian performing a side-by side comparison of the like-format files (PDF-to-PDF, native-to-native)
- 5. View the electronic file to see if any of the following automatic features have been applied: current date, current file name, tracking changes, hidden fields, or access restrictions. The RMS librarian shall address all of the record/document's automatic features with the submitter prior to RMS check in and make decisions as to how to proceed.
- 6. The RMS librarian shall then check in the document/record to RMS, following these conventions:
 - Check in the editable or native electronic document as the primary file
 - If the native file is a standard WFS format (MS Word, MS Excel, MS Powerpoint, RTF, HTML, PDF, ASCII), then WFS will automatically generate a PDF version and check it in as the alternate file
 - If the primary file is not a standard WFS file format, then the submitter or RMS

- librarian will manually generate a PDF version of the file. The RMS librarian shall check in the PDF version as the alternate file in the same record
- If the native file is not available or no longer exists, then the RMS librarian shall check in the PDF version as the primary file (another PDF file will automatically be created as saved as the alternate file)
- 7. No modifications shall be made to either the primary or alternate electronic file by the RMS librarian, unless warranted. The RMS librarian recognizes the importance of mantaining the integrity of each file
- 8. The primary file name shall remain unchanged when a record/document is checked in to RMS, unless a reason warrants a change
- 9. When the RMS librarian checks in a submittal to RMS, the Exclusive Checkout feature is set to "Yes," regardless of Document Status (draft or final)
- 10. When a submittal has been successfully processed into RMS, then the RMS librarian will conduct a page-by-page comparison of the Alternate file against the submitted file to assure the new RMS record/document file is complete and accurate
- 11. The RMS librarian shall contact the submitter after the record/document has been successfully checked in to RMS

The Librarian Submittal Form is the preferred RMS check-in method, especially when processing many records/documents. The Librarian Submittal Form utilizes WFS batch loading capability, which checks in records/documents in real time.

However, the WFS interface offers an advantage over the RMS Librarian Submittal Form, and the RMS librarian may elect to use WFS when metadata can be cloned from a checked-in record/document.

If checking in a modified record/document, the RMS librarian shall not include [CO by userid] text in the most recent version's metadata. The notation [CO by userid] indicates the person who is currently is modifying the record/document—Checked Out.

Record/Document Modification and Check Out Process

Multiple versions of a record/document can be checked in to RMS. Only the RMS librarian can check in and check out records/documents to ensure quality and consistency. When a new version of a record/document needs to be created, a copy of the checked-in record/document shall not be downloaded for revision to be later checked in by the RMS librarian, avoiding the situation where more than one person makes parallel modifications to multiple copies of a single record/document.

To revise a record/document, the requesting modifier shall do the following:

- 1. Search and retrieve the record/document to be modified
- 2. Click on *Document Details* to determine the unique WFS record number and the version number, or note the exact title of the record/document along with the author(s) and the version number

- 3. View the contents of the record/document's Description/Comment field to see if another person is currently modifying the record/document, indicated by the "CO by userid" notation at the end of the text field
- 4. Contact the RMS librarian requesting to check out a specific version of a particular record/document, relating the document details found in Step 2

Prior to checking out a record/document version from RMS, the RMS librarian shall view tracking information to see if another person is currently modifying that record. If another person has checked out the record/document for modification, the RMS Librarian shall contact the requesting record/document modifier to work out a solution. If not checked out, the RMS Librarian shall:

- 1. Append the text "CO by [userID]" at the end of the Description/Comments field, where CO represents "Checked Out"
- 2. Review and make any modifications to the current version's metadata; for once a record/document version is checked out, the metadata cannot be modified
- 3. Check out the record/document version
- 4. Track that the record/document has been checked out and who is modifying it
- 5. Notify the record/document modifier

The record/document modifier then retrieves a copy of the record/document version to edit. Depending on the version control (configuration management) process that the modifier is using, there are three possible places that a record/document can be retrieved to edit:

- From the modifier's local drive. Open the correct version of the file on the local drive to edit. Edit the file as needed, saving the edited versions on the local drive
- From a version control tool. Retrieve the latest version from your version control tool and save the file to a local directory. Use the version control tool to manage iterations of the file
- From RMS. Click on the link in the RMS record for the latest editable version of the document and save the file to a local directory. Edit the file as needed, saving the edited versions on the local drive

When the record/document modifier has completed changes and the record/document is ready to be released, the new version of the record/document shall be checked in to RMS. The RMS submittal process is the same for new or modified records/documents. Checked-out records/document are preserved in RMS. When the revised record/document is checked into RMS, it is processed as either a new revision of an existing record/document or entered as a new record/document.

If the record/document is used to support another work product or has great significance to other work products, then each new version of the record/document with a Final Status shall be checked in to RMS as a separate record in order to optimize Web FileShare's full text search capabilities. WFS performs searches only on the most recent version of the checked in file and the metadata. If more than one version exists, the RMS librarian shall enter one of the following

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phrases enclosed in square brackets within the title: "Superseded by WFS#####" or "Supersedes WFS######." This creates traceability amongst the final (or released) versions and is especially important for SAND documents.

On the other hand, if the previous version of a record/document will no longer support another work product, then just a new version of the existing record/document shall be created and not a new record/document. This applies to records/documents with either Final or Draft status. Example records/documents include the RMS Guidelines, RMS help files, correspondence, and meeting minutes.

Disposition and Deletion Processes

RMS records are retained according to considerations of corporate, programmatic, and individual requirements; however, RMS has not defined disposition processes and standards at this time. Corporate disposition requirements are designed to meet federal requirements; and RMS disposition plans, when documented, will comply as appropriate.

Example: RMS records will need to be retained a commensurate amount of time for the product those records are supporting, such as a weapon system.

It is possible to delete RMS documents, per data owner or management request to the RMS librarian. However, official records cannot be deleted. The RMS librarian uses the WFS interface to complete deletions for documents.

A file plan was provided by RIM (Recorded Information Management) during the summer of 2001, outlining V&V records and defining a single records series for all V&V records—RD-130-208-000.

16. Search and Retrieval

Searching and Retrieving in RMS

There are three basic ways to search for records/document using the RMS application.

- Topic Search. This is a set of subject-related queries, organized into a hierarchical structure. The further you drill down in the hierarcy, the narrower your search becomes. It is possible to retrieve a particular record/document from any number of routes through the hierarchical structure
- Attribute Search. Search by title, author, document category, year, and/or full-text search
- Refined Topic Search. After completing a query from the topic search, you can further refine that search by selecting any combination of attributes in the Attribute Search screen

Since RMS is a customized application, including search and retrieval capabilities, it is advantageous for the RMS user to use the RMS interface instead of WFS for searching and

retrieving. RMS uses a sophisticated set of keywords to support a wide variety of subjects and the topic search capability, and RMS users won't be familiar with these keywords. Thus, the searches using WFS may not return the expected results. In addition, RMS automatically restricts the search to include only ASCI V&V records/documents.

When a person downloads a copy of a record/document from RMS, providing access has been granted, and modifies the copy; the original record/document will not be affected. This technique may be used for templates and forms, for example.

Full-Text Searches

RMS provides the capability of performing full-text searches on some records/documents, employing the Verity search engine in WFS. However, these full-text searches are limited to records/documents formatted in WFS standard file formats. Full-text searches do not search metadata, previous record/document versions, or any record/document saved in non-standard WFS file format.

Viewing Records/Documents and Associated Metadata

The results of all RMS retrievals will be displayed via the WFS interface.

- Clicking on the Title link or the thumbnail sketch will open the PDF file (also known as the Alternate File or the record copy)
- Clicking on the Native File link will open the submitted version of the record/document
- Clicking on the Document Details link will display all the associated metadata
- Clicking on the All Revisions link will display all of the checked in revisions

17. Record/Document Creation Recommendations

So that RMS records/documents contain essential identification and descriptive information to enable searching, retrieval, and records management activities, the RMS librarian has defined the following set of recommendations for authors creating or modifying records/documents:

The following information should be documented on the title page of a record/document, with the realization that some items listed below do not apply to all records/documents:

- Descriptive title
- Additional clarifying information, such as project name, program name, and conference name and date, if appropriate
- Author(s), using full or legal names and the authors' company or agency names
- Publication or print date: the date the record/document was finalized (make sure the date does not appear as the current date)

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- Any Report IDs and Report Numbers, such as SAND numbers or conference numbers
- Draft status notation, if applicable
- Any information sensitivity marking, such as OUO

Other identifying information may also be included on the title or introductory page, such as

- Abstract description
- Purpose
- Copyright information

Pagination and date information should included in the file footer, as specified below, if applicable:

- Title and/or file name of the record/document
- Page numbers, preferably Page 1 of 2; Page 2 of 2, for example
- Date the record/document was finalized or printed
- A fixed date shall be used, rather than the automatically updated current date.

The record/document submitter chooses the file name, with the following recommendations:

 Descriptive file names are recommended, including data that may be captured in the local directory name, but not the file name

Example: Directory Name: ABC Project; File name: Project Plan FY02 Submitted file name: ABCProjectPlanFY02.doc

- It's not required that the file name be unique for RMS purposes
- The RMS librarian will not change file name, unless necessary
- To avoid unforeseen file conversion difficulties, the file name shall not include spaces

The RMS user should be aware of the complications that result from the use of an application's automatic features. These automatic features include current date, current file name, tracking changes, hidden fields, access restrictions, and macros.

Example: An MS Word file is checked into RMS as the native file, which uses the current date automatic feature. During check in, a PDF file is automatically created as the Alternate File. The issue is that the native file does not contain the actual publication date, but instead may display the date that the file was last revised or printed, and consequently information about the record/document is lost. The Alternate File will display the date the file conversion took place; and since the PDF file is the record copy, it will contain a misleading date and/or inaccurate publish date.

Example: Tracking changes may or may not be preserved during RMS check in. The preferred method is to check in the record/document with the edits incorporated into the electronic file. However, the checked in version may display the tracked changes.

The RMS user needs to carefully consider the ramifications of using auto features prior to submitting files to RMS. It is recommended to turn off or not use automatic features for

records/documents to be submitted to RMS. If any of these automatic features are applied in the electronic file, the RMS librarian will address them with the submitter prior to RMS check in to finalize decisions.

18. WFS Field Content Rules

The following rules apply to all records/documents managed in RMS. The main purpose of these rules is to incorporate consistency and accuracy into a record/document's descriptive information, which in turn affects the quality of records management processes, as well as search and retrieval activities. While these rules apply to both submitters and RMS librarians, it is the responsibility of the RMS librarian to ensure that these rules are followed.

It is the responsibility of the RMS librarian to maintain the metadata for records/documents managed in RMS. The RMS librarian shall update metadata when necessary, including the following events:

- A data entry error is discovered
- RMS processes are refined
- New RMS or program requirements are defined
- An error or an omission is found in the metadata during the check-out process
- New information is available
- Additional keywords are defined or existing keywords are modified

The RMS librarian can make manual changes, record by record, or may employ the assistance of the WFS team and request mass updates of metadata for records/documents checked in to RMS.

The following subsections are the WFS user field prompt names; they have been alphabetized for ease in reference.

Access Control Groups

At least one RMS access control group must be assigned for each V&V record/document, selected from the approved list of access control groups defined for ASCI V&V information (see Section 13 for more details).

Author(s)

All of the authors shown on the record/document shall be entered in the Author field in the same order as shown on the document.

The author's full name shall be entered to ensure consistency, and nicknames or shortened names are to be avoided. Author names shall be verified against the web-based Sandia Phone Directory or the WFS Author lookup list to assure consistency and completeness. The Sandia Phone Directory is the preferred resource, as it displays the author's full name.

Example: Trucano, Timothy G.

If an author's name is not included in one of the above-mentioned resources, then the author's name shall be entered as shown on the document, following the Sandia Phone Directory format, in order to document the name as completely as possible.

Example: Davis, William-Amos

If there are multiple listings of the same name, the RMS librarian shall contact the submitter for clarification.

When an author's name has changed since the date on the document, the author's name shown on the document shall be entered, followed by the author's current name in brackets.

Example: Lopez, Amalia R. [Black, Amalia R.]

If no author is shown on the record/document or is not known by the RMS librarian, "Not specified" is entered into the author field.

Example: Not specified

If the RMS librarian learns of authorship after the record/document has been checked in to RMS, the author's name shall be entered in standard format, as noted above, followed by the text [Not specified]. This is done in order to authenticate the record and to preserve authorship information for disposition and need-to-know purposes.

Example: Froehlich, Gary K. [Not specified]

Description/Comments

The following statements or information shall be entered into the Description/Comments field, when applicable, preferably in the sequence listed below. The Description/Comment field's maximum length is approximately 256 characters, and all subsequent text will be automatically truncated. Periods are used between parts of the Description/Comments field to document complete statements, with the exception of the abstract text.

- 1. Processing of this submittal has been placed on hold.
- 2. This revision contains both native and pdf formats. (Note: When a duplicate record/document version is submitted with a file type not received during the intital submittal, then a new revision of the record/document is checked in to RMS that contains both the native and pdf versions and the original revision contains only the pdf version)
- 3. Additional descriptive text from or in reference to the record/document (Examples include the following:)
 - Attachments referenced at the end of this record/document were not included when received from the submitter.
 - Lessons learned are included.
 - Electronic file with no signature.

- There is a companion document = WFS######.
- This draft plan was used for mm/yyyy peer review.
- Official Use Only/In Strict Confidence. For distribution guidelines, contact person name.
- Date of Review: mm/dd/yyyy. Panel members: person name; person name; person name
- 4. Copyright statement.
- 5. Abstract text (Note: Truncate as necessary to allow for additional statements or information to be included in their entirety)
- 6. Details about applied native application's automatic features; such as, current date, current file name, tracking changes, hidden fields, access restrictions, and macros
 - Date on document does not reflect publish date.
 - Date on document and header date do not reflect publish date.
 - Header date does not reflect publish date.
 - Header dates and document date do not reflect publish date.
 - Footer date does not reflect publish date.
 - Header file name does not reflect submitted file name.
- 7. Checked out tracking information, "CO by *userID*," where CO represents Checked Out

Folder

For records/documents in the ASCI V&V Program, "VandV" shall always be entered in this field. This meets a requirement from the ASCI Program Office, necessitated by a previous web application that was created to manage ASCI Program Office records/documents. If other programs employ RMS in the future, then other folder text will be defined and entered.

Information Content

The RMS system is not employing this field for submittal, search, and retrieval functions; however, "Document" is the default text to be entered in this field. WFS controls the selections to be entered in this field, and RMS will conform to this list of selections.

Information Sensitivity

WFS controls the selections to be entered in this field; however, RMS uses only a subset of the selection list. RMS selections are limited to the following:

- IDO/IUO (Internal Distribution Only/Internal Use Only)
- M/FI (Management/Financial Information)

- OUO/FOUO (Official Use Only/For Official Use Only)
- TUCI (If in doubt, use Treat as Unclassified Controlled Information)
- UNL (Unlimited Distribution)

Keywords

The three keywords, ASCI, SEPR, VandV, must always be entered first in this field, in the stated sequence. This meets a requirement from the ASCI Program Office, necessitated by a previous web application that was created to manage ASCI Program Office records/documents.

All other approved keywords are formatted as subject-value pairs (Subject=Value). Detailed information is available in the following tables:

- Table 6 for RMS Valid Keyword Subject-value Pairs
- Table 8 for Keyword assignment Dependency Rules
- Tables 9 13 for RMS Keyword Definitions
- Table 14 for Keyword Patterns

Keywords shall be entered a consistent sequence to enable easier proofreading and modification of keywords. Keywords shall be separated by semi-colons. The Document Status (DT=D or DT=R) keyword shall be located at the end. However, if WFS does a keyword batch addition, that keyword is always appended to the end of the keyword string, and thus the Document Status keyword will be located near the end of the keyword string.

All applicable keywords shall be assigned to each record/document, following this decision progression:

- 1. Is there a documented keyword pattern? If so, enter the keywords as shown in Table 14
- 2. Is the information content of the record/document administrative or technical in nature? Is the intended purpose of the information for administrative or technical use? Analyzing the category or the general area of the record/document may help determine if it is administrative or technical in nature
 - If administrative, assign GN=ADMIN
 - If technical, assign GN=TECH

Example: If the record/document is a template/form, determine the intended use—administrative or technical?

Another example: If the record/document is training information, determine if the purpose of the training is administrative or technical in nature

- 3. Choose keywords to represent both the subject(s) and the object(s), usually found in the title or abstract. For example:
 - Record/Document Title: Scoring Sheet for V&V Plan
 Subject: scoring sheet Keyword: DC=RSLT

Objects: V&V, plan Keywords: DC=PLN, GN=VV

Record/Document Title: Overview Presentation of FUEGO
 Subject: Overview, presentation Keywords: DC=OVRVW, DC=PRSNT

Objects: FUEGO Keyword: CD=FUEGO

4. Additional keywords may be assigned for large portions (at least 30 percent) of the record/document for subject(s) and objects(s) not necessarily contained in the title

- 5. Keywords shall usually be assigned for both the implicit and explicit primary subjects and objects of the record/document, but not the subtopics' subjects and objects
- 6. If Code Project keywords are assigned, the RMS librarian shall determine what Code Intended Use keywords shall be assigned; if Code Intended Use keywords are assigned, the RMS librarian shall determine what Code Project keywords shall be assigned to record associations between Code Projects and Intended Use

Example: If the record/document is entitled, "Integrated V&V Plan for the W-76 in a Fire," assign the keywords PRGM=VV, DC=PLAN, WS=W76, CD=FUEGO, and USE=ABNRML.

- 7. Assign mandatory keywords for these subjects: Publication Year, Fiscal Year, Status, Document Type
- 8. Look at the title page and abstract for primary guidance
- 9. Look at Table of Contents for secondary guidance
- 10. Analyze if more broader-definition keywords need to be assigned (usually the General Area keywords)
- 11. Analyze if additional narrower-definition keywords need to be assigned
- 12. Think of how different groups of people would probably search for this record/document, including management, technical and administrative staff, auditors, records management personnel, and assign appropriate keywords

The more comprehensive the subject of a record/document, the more keywords will be assigned. Conversely, if the document has a narrow scope, fewer keywords will be assigned.

There are broad- and narrow-definition keywords. If a narrow-definition keyword is assigned, then the corresponding broader-definition keyword must also be assigned. However, if a broad-definition keyword is assigned, then assigning the narrow-definition keyword(s) is optional.

Example: If the record/document refers to V&V work (GN=VV), it is possible that either or both SBGN=VER and SBGN=VAL will also be assigned.

Example: If SBGN=VER is assigned, then GN=VV must also be assigned.

If a record contains information that is both administrative and technical, the document will be considered technical in nature (GN=TECH).

Metadata Only Records

For those RMS records/documents that have an accompanying electronic file checked in to RMS, "NO" shall be entered for the Metadata Only field.

For the instances shown below when an electronic file is not checked in, "YES" is the choice.

- Paper records
- An electronic document is maintained outside of RMS and a pointer to this electronic file is maintained in the URL/Location field in RMS

Metadata Viewable by all Sandians?

As both the checked-in file and the metadata are access controlled, "NO" shall always to be entered into this field.

Nuclear Weapons Design Information

The RMS system does not manage records/documents for weapons design information. Therefore, "NO" shall always be entered in this field.

Originating Org(s)

All authors' originating organizations (agencies) which prepared/published the record/document shall be entered, if possible, following the format of the WFS Originating Org lookup list. If an organization is not identified in the WFS lookup list, then the organizations' full names, if possible, shall be entered, rather than just acronyms or abbreviations.

Example: New Mexico State University; University of New Mexico

If more than one originating organization is entered, the individual organization names shall be separated with semi-colons.

If the record/document is an ASCI V&V Tri-Lab publication, all three agencies—SNL, LANL, and LLNL—shall be entered into this field. If the record/document contains the Tri-Lab logo, it does not necessarily mean that the document is Tri-Lab in origin; therefore, the three agency names would not necessarily be entered.

Program/Function

For all ASCI V&V RMS records/documents, "SEPR" shall always be entered in the WFS Program/Function field.

Project/Activity/Process

For all ASCI V&V RMS records/documents, "ASCI" shall always be entered in the WFS Project/Activity/Process field.

Release Date

RMS uses this field to document the date that the record/document is checked in to WFS, entered in the format mm/dd/yyyy. Publication and file dates are entered in the Title field.

Report ID

If the record/document has been assigned any report identification numbers (IDs), they are to be entered in this field. Semi-colons separate individual IDs. If one of the document numbers is a SAND number, it should be entered first.

Example: SAND2000-1656C; AIAA 2000-2549

Unique identification numbers may be assigned to the following: reports, documents, publications, or conference presentations.

Strategic Objective

For all ASCI V&V records/documents, "Nuclear Weapons SBU" shall always be entered in the WFS Strategic Objective field.

Title

The general format for the title field is shown below:

Title As Shown on Document, SANDyyyy-###, Other Report #s [Version ##] [Authorized Keyword(s)] [Supplemental Information] [Doc Date mm/dd/yyyy]

The title text shall be entered first so that retrieved records/documents are displayed in alphabetical order, with supplemental information following the title text. The title shall be entered exactly as printed on the record/document, including punctuation. No additional punctuation or end-of-line returns shall be entered. Titles shall be entered using initial capitals, for consistency and ease of reading. Acronyms are exceptions to this requirement.

The only authorized keywords that may be entered in the title are Draft, Template, and Correspondence. The authorized keywords are entered at the beginning of the supplemental section if it is not already stated in document's title. For finalized documents, [Final] is *not* added to the title, unless already included in record/document's title. Templates are final if ready to be released for customer use.

Example: If the record/document is a template (DC=TMPLTFRM), then enter [Template].

Example: Draft and rough draft documents shall always be identified in the RMS title as [Draft] following the version number.

If the record/document does not have a title, the following text shall be entered in brackets in lieu of the Title As Shown on Document. This is the only exception to the requirement that the title text is entered first in the title field.

Example: Include a Descriptive Title [Title not specified].

SAND report numbers shall be entered in the title field after the title text, as shown on the document:

- SANDyy-####
 (Printed prior to 2000, where yy = last two digits of the calendar year and #### = the assigned control number)
- SANDyyyy-####
 (Printed in 2000 and after, where yyyy = the calendar year and #### = the assigned control number)

If the record/document has other document identifiers or numbers, they shall be entered after the SAND report number, or the title text if there is no SAND report number, with each identifier or number preceded by a comma and a space.

Example: Validation Methodology in Computation Fluid Dynamics (invited), SAND2000-1656C, AIAA 2000-2549 [Fluids 2000, Denver, CO, 06/19-22/2000] [Doc Date not specified]

If a version or revision number is shown on the document, that information shall be entered in the title field. *Version* is the only term to be used for software records/documents. The version number shall be surrounded by square brackets, following the title, any report numbers, and a space.

Example: GOMA V&V Plan [Version 2.4]

If supplemental title information is available that may aid the user in searching or understanding the content, but is not officially part of the title, that information shall be entered after the title, any report numbers, and the version information, in brackets. If more than one piece of supplemental information is added to the title, semi-colons shall separate the pieces.

Example: V&V of Software Used for Modeling and Simulation [SEM Annual Conference on Experimental Mechanics, 06/04-05/2001]

One or more dates shall be entered in the title field surrounded by square brackets, following the title and any report numbers, version numbers, and authorized keywords. The kind of date shall be documented, followed by the actual date. The following are the valid date types:

- [Doc Date mm/dd/yyyy] the date shown on the record/document
- [Doc Print Date mm/dd/yyyy] the print or publish date shown on the record/document
- [Doc Date mm/yyyy] [File Date mm/dd/yyyy] when a specific date is not provided within the record/document, the file date of the electronic file is included
- [Doc Date not specified] [File Date mm/dd/yyyy] no date is available for the record/document, yet the file date of the electronic file is identified prior to submittal to RMS

The date shall always be displayed as mm/dd/yyyy, with the exception of SAND Report dates, which are displayed as Doc Print Date mm/yyyy.

If the automatic date feature has been applied to an electronic record/document, then [Doc Date not specified] shall be entered. The rationale for this decision is that when the automatic date feature is applied, the primary or native file will continue to display the current date, which is not the legitimate document date. In addition, the alternate or PDF file (the record copy) will display the static date of conversion from the native to the PDF file. If the automatic date feature is used, then it needs to be documented in the Description/Comments field (refer to Description/Comments subsection).

When a document date is not specified, the file date shall be entered.

Example: [Doc Date not specified] [File Date 10/01/2000]

When a document date is not specified for a conference paper or presentation, but the conference date is identified, the document date shall be the first day of the conference.

If an email correspondence has been distributed to multiple parties via forwarding (FW in Outlook), the original email title and author(s) shall be entered in RMS. If the email is a thread of messages, then descriptive information about the most recent message shall be recorded.

If the record/document is attached to another record/document or has attachments, a reference shall be added to the end of the title field:

- [w/Attachment WFS#####](record/document has attachment(s))
- [Attached to WFS#####] (record/document is an attachment of another document)

If the record/document is superseding or has been superseded by another record/document, a reference shall be added to the end of the title field:

- [superseded by WFS#####] OR [superseded by WFS#####, WFS#####]
- [supersedes WFS######] OR [supersedes WFS######, WFS######]

Example: [Superseded by WFS#####, Draft, and WFS#####, SAND2001-3798]

Example: [Supersedes Drafts, WFS##### and WFS#####]

URL/Location

When it is necessary to maintain the record/document in paper format, a notation shall be included in this field.

Example: This is a paper document. Location: 880/B34C Custodian: RMS Librarian

RMS documents and reference information may either be maintained in RMS or in non-RMS repositories. In the latter case, the pointer or link to the document located in the non-RMS repository is entered in the URL/Location field. The URL/Location field is also used to record a document's physical location. The submitter shall work jointly with the RMS librarian to appropriately identify the location of a document in a non-RMS repository. Ultimately, it is the submitter's responsibility to keep the RMS librarian apprised of the current location of the document/reference.

If the submitter provides an electronic version of a SAND report, it is checked in to RMS. SAND reports are RMS records, and these files are considered to be the record copies.

19. Keywords

Subject-value Pairs

Table 6 lists all valid RMS keywords and the constraints for assigning keywords to records/documents in RMS.

Table 6: RMS Valid Keyword Subject-value Pairs.

Subject	Keyword	Keyword Full Text	Constraints and Comments
	ASCI SEPR VandV	Accelerated Strategic Computing Initiative Simulation Enabled Product Realization Verification and Validation	Mandatory. All 3 keywords recorded for each record/document to meet the ASCI Program's Office requirements, per Fran Current.
Code Project	CD=ADAGIO/PRESTO CD=ALEGRA CD=ANDANTE CD=ARIA CD=CALORE CD=CEPTRE/ITS CD=COYOTE CD=CUBIT CD=DAKOTA CD=EMPHASIS CD=FUEGO/SYRINX CD=GOMA CD=HPEMS/XYCE CD=NEVADA CD=PEGASUS CD=PREMO CD=PRONTO/JAS	ADAGIO/PRESTO ALEGRA ANDANTE ARIA CALORE CEPTRE/ITS COYOTE CUBIT DAKOTA EMPHASIS FUEGO/SYRINX GOMA HPEMS/XYCE NEVADA NUGET PEGASUS PREMO PRONTO/JAS	Optional. 0, 1, or more.

	CD=SALINAS	SALINAS	
	CD=SIERRA	SIERRA	
	CD=VERDE	VERDE	
	CD=VIPAR	VIPAR	
Program	PRGM=VV	Verification and Validation	Mandatory for all V&V -related documents.
Document	DC=FIG	Figure/Diagram (both)	Mandatory. 1 or more.
Category	DC=JRNLPB	Journal Publication (tech only)	
	DC=PRSNT	Presentation/Conference Paper (both)	
	DC=TECHMISC	Misc. Technical Document (tech only)	
	DC=CRRSP	Correspondence/Email (both)	
	DC=MTGMIN	Meeting Minutes (both)	
	DC=ORGCHRT	Org Charts (admin only)	
	DC=RPT	Report (both)	
	SBDC=QRTRPT	- Quarterly Report (admin only)	
	SBDC=SNDRPT	- SAND Report (tech only)	
	DC=FIN	Financial (admin only)	
	DC=SOWTSK	SOW/Task Sheet (admin only)	
	DC=OVRVW	Overview (both)	
	DC=TMPLTFRM	Template/Form (both)	
	DC=ADMINMISC	Misc. Administrative Document (admin only)	
	DC=PLN	Plan (both)	
	SBDC=IP	- Integrated Plan (admin only)	
	SBDC=DOEPLN	- DOE Program Plan (admin only)	
	DC=RSLT	Results/Feedback/Review (both)	
	DC=RQMT	Requirements/Procedures/Processes (both)	
	DC=GDMNL	Guide/Manual (both)	
	DC=QSTNNR	Questionnaire (both)	
Document Sta	itus STAT=DRFT	Draft	Mandatory. Only 1.
	STAT=FNL	Final	
Weapon Syste	em WS=B61	B61	Optional, 0, 1, or more.
	WS=W76	W76	
	WS=W78	W78	
	WS=W80	w80	
	WS=B83	B83	

	WS=W87	W87	
	WS=W88	W88	
Code Intended	USE=ABNRML	STS Abnormal	Optional. 0, 1, or more.
Use	USE=HSTL	STS Hostile	
	USE=NRML	STS Normal	
	USE=CPM	Components, Production, and Manufacturing	
	USE=FT	Framework and Tools	
Funding Year	FNDYR=2003	FY03	Mandatory. Only 1.
	FNDYR=2002	FY02	
	FNDYR=2001	FY01	·
	FNDYR=2000	FY00	
	FNDYR=1999	FY99	
	FNDYR=1998	FY98	
	FNDYR=1997	FY97	
	FNDYR=1996	FY96	
General Areas	GN=ADMIN	Administrative	Mandatory. 1 or more.
	GN=ASSMT	Assessment	
	SBGN=AUDIT	- Administrative Audit	
	GN=CODE	Code/Project	
	GN=GDNC	Guidance	
	GN=PRVW	Peer Review	
	SBGN=PRVW1	- Peer Review Level I	
	SBGN=PRVW2	- Peer Review Level II	
	SBGN=PRVW3	- Peer Review Level III	
	GN=PRJMGMT	Project Management	
	SBGN=RSKMGMT	- Risk Management	
	GN=RCDMGMT	Records Management	
	GN=STCKCMPT	Stockpile Computing	
	GN=SWPRCT	Software Practices	
	GN=SS	Stockpile Stewardship	
	GN=TECH	Technical	
	GN=3LAB	Tri-Lab	
	GN=UQ	UQ	
	GN=USE	Code Intended Use	
	GN=VV	Verification and Validation	

	SBGN=VAL	- Validation	
	SBGN=VER	- Verification	
	GN=WPN	Weapon System	
V&V Peer	PR1=PRO	Level I Prototype	Optional. 0, 1, or more.
Review Level I	PR1=S1	Level I Session 1	
	PR1=S2	Level I Session 2	
	PR1=S3	Level I Session 3	
	PR1=S4	Level I Session 4	
V&V Peer	PR2=PRO	Level II Prototype	Optional. 0, 1, or more.
Review Level II	PR2=S1	Level II Session 1	
	PR2=S2	Level II Session 2	
	PR2=S3	Level II Session 3	
	PR2=S4	Level II Session 4	
V&V Peer	PR3=PRO	Level III Prototype	Optional. 0, 1, or more.
Review Level III	PR3=S1	Level III Session 1	
	PR3=S2	Level III Session 2	
	PR3=S3	Level III Session 3	
	PR3=S4	Level III Session 4	
Publication Year	PBYR=2003	2003	Mandatory. Only 1.
	PBYR=2002	2002	
	PBYR=2001	2001	
	PBYR=2000	2000	
	PBYR=1999	1999	
	PBYR=1998	1998	
	PBYR=1997	1997	
	PBYR=1996	1996	
	PBYR=1995	1995	
Training or	TRNG=Y	Yes	Optional. 0 or 1.
Essential Reading			
Document Type	DT=R	Record	Mandatory. Only 1.
	DT=D	Document	

Code/Project Keyword Successors/Predecessors

New ASCI codes are continuously being created, with some new codes having predecessors. Table 7 documents the successors and predecessors for those codes. The table's purpose is for the RMS librarian's general understanding of the information being managed in RMS.

Table 7: Code Successors/Predecessors.

Code Name	Successor To	Predecessor To
ADAGIO/PRESTO	PRONTO/JAS	
CALORE	СОУОТЕ	
GOMA		ARIA
SACCARA		PREMO
PRONTO/JAS		ADAGIO/PRESTO
СОУОТЕ		CALORE
ARIA	GOMA	
PREMO	SACCARA	

Keyword Relationships

Some of the keywords in RMS have relationships with other keywords. If a record/document's keywords include a code, such as ALEGRA, then the RMS librarian shall also enter the related Code Intended Use keywords.

Keyword Assignment Dependency Rules

Many of these dependency rules are programmed into RMS to ensure consistent application of the rules, as documented in Table 8.

Table 8: Keyword Assignment Dependency Rules.

General Rule	Specific Rules
record/document, then the keyword's corresponding broader keyword must also	If at least one Code/Project keyword (CD=xxxx) is assigned to a record/document, then General Area = Code/Project (GN=CODE) must also be assigned. If at least one Code Intended Use keyword (USE=xxxx) is assigned to a record/document,
be assigned.	then General Area = Code Intended Use (GN=USE) must also be assigned. If at least one Weapon keyword (WS=xxxx) is assigned to a record/document, then General Area = Weapon (GN=WPN) must also be assigned.
	If a Sub Document keyword (SBDC) is assigned to a record/document, then it's corresponding Document Category (DC) keyword must also be assigned.
	If a record/document is determined to be a Plan (DC=PLN), Requirement/Process/Procedure (DC=RQMT), and/or a Guide/Manual (DC=GDMNL), then the General Area = Guidance (GN=GNDC) must also be assigned.

	If a Sub General Area (SBGN) keyword is assigned to a record/document, then it's corresponding General Area (GN) keyword must also be assigned. If a PR1 keyword is assigned to a record/document, then Sub General Area = Peer Review
	I (SBGN=PRVW1) must also be assigned. If a PR2 keyword is assigned to a record/document, then Sub General Area = Peer Review II (SBGN=PRVW2) must also be assigned.
	If a PR3 keyword is assigned to a record/document, then Sub General Area = Peer Review III (SBGN=PRVW3) must also be assigned.
A record/document must be either Administrative or Technical in nature.	Each record/document must be designated as either GN=ADMIN or GN=TECH. If a record/document is determined to be administrative in nature, then at least one of the administrative Document Category (DC) keywords is assigned. If a record/document is determined to be technical in nature, then at least one of the
	technical Document Category (DC) keywords is assigned
Other Relationships amongst Keywords	If a record/document is described as General Area = Peer Review (GN=PRVW), then it must also be described as General Area = Assessment (GN=ASSMT).
	If a record/ document is described as General Area=Peer Review (GN=PRVW), it may be described in further detail as Level I, II, or/and III, and assigned to multiple sessions across the three levels.

Keyword Definitions

To ensure consistency in how keywords are applied to records/documents, Tables 9 - 13 document keyword definitions and rules. Example documents/records are also listed. The information content determines applicable keywords.

Table 9: RMS Keyword Definitions - Document Category.

Value	Admin/ Tech	Definition	Examples .	Comments
Journal Publication	Tech	Any article, essay, composition, or paper that is published, either internally or externally in some sort of professional journal, periodical, or review. Goes through the SNL review and approval process.		More than likely, a document cannot be both a journal pub and a conference paper. A SAND document may also be a journal publication.
Presenta- tion/Conference Paper	Tech or Admin	meeting, which may also be published in conference proceedings, a SAND report, or other reports.	Presentation at DOE Quarterly Review Peer Review Quick-Look Feedback for Codes or Kickoff	More than likely, a document cannot be both a journal pub and a conference paper. May be either internal or external to SNL.

Misc. Technical	Tech	Any document that does not fit in		
Document		any of the other technical document categories.		
Correspon- dence/Email	Admin or Tech	Any written form of communication addressed to one or more people, including letters, memos, emails, transmittals.	Outlook email message and responseSandia memoLLNL letter to a Sandian	
Meeting Minutes	Admin or Tech	Documented information of meeting discussions, which may include action items, schedules, technical or administrative decisions, topics covered, and attendees.	•Peer Review tasking memo	
Org Charts	Admin	An organization's hierarchical structure of personnel, funding, or work.	•SNL management org chart •Campaign funding	
Report	Admin or Tech	A formally documented account or statement that provides a detailed description of an event, condition, technology, situation, status, or achievement.	DOE Status Report SAND report Quarterly report Audit report Peer Review Program Office Report Fiscal Year Final Report Team Feedback Report V&V Peer Review Code-Specific Written Final Report	
Quarterly Report	Admin	A specific kind of report, detailing what work was accomplished in a quarter for a specific PTN or program.	•Quarterly Report FY01Q2 for PTN 1.2.1.1.3 •Quarterly Report First Quarter FY00 for SNL ASCI Program	
SAND Report	Tech	A SNL SAND report, either in draft or final status.		
Financial	Admin	monetary information.	Project Budget Financial Audit Report V&V Audit Questionnaire Task where Dollars are being Applied Five Year Plan for Campaign Six Abnormal Environments Subprogram Implementation Plan (may contain financial information)	Assign ascirms-m access group

SOW/Task	Admin	Any information dealing with state-	•Action Plan for Defining and Executing FY00 Peer Review	
Sheet		ment of work or delineation of	Process	
		project tasks.	•Five Year Plan for Campaign Six	
			Abnormal Environments	
	-		Subprogram	
Overview	Admin or	Any high-level summarization,	•A Summary of Level I Peer	
	Tech	recapitulation, or outline of key	Reviews	
		points for a topic.	ASCI Algorithms Code	
			Capabilities Plan	
			•ASCI/ESRF/V&V Review	
			Presentation	
			Summary of Code Project in	
			Preparation for Peer Review of	
			Code	
			•ASCI V&V Kick-Off Meeting	
			Briefing presentation	
Template/ Form	Admin or	A document (not a record) that	Scoring Sheet for Integrated V&V	The intended purpose of the
	Tech	contains the structure for what	Plan Content	template or form will determine
		information content needs to be	•Quick Look Templates	if it is technical or
		entered, providing consistency for	•V&V Peer Review Code- Specific	administrative.
		presentation and content. Also	Written Final Report Template	adiminod ati vo.
]		called boilerplate.	•Training Manual Cover and Index	
		caned vonerplace.	•Peer Review—Training Materials	
Misc. Admin	Admin	Any document that does not fit in	• ASCI Upcoming Event Schedule	
iviise. Adiiiii	Adilliii	any of the other administrative		
		document categories.		
Dlan	A desire an		•V&V Plan	37.0 37 Dlan in 40 dlaning in
Plan	Admin or	A strategy or blueprint for	•Code Capabilities Plan	V&V Plan is technical in
	Tech	achieving something.	• Five-year plan	nature. Project Management
				Plan is administrative in nature.
			• Action plan	
			•Scoring Sheet for V&V Plan	
			Content	
			•Implementation Plan	
1	Tech	Outlines the steps for implementing	• V&V Program IP for FY02	An integrated plan is used to
(IP)		the V&V Program for a fiscal year.	•	administer technical work,
				therefore it is technical in
				nature.
DOE Program	Admin		•5-year plan	
Plan				
Results/	Admin or	Any kind of response to or	Peer Review Quick Look	
Feedback/	Tech	evaluation of a particular event,	Feedback	
Review		activity, plan, capability, process,	Performance Self-Assessment	
		document or technology. Includes	Program Feedback	

	l			
			•Confidence in ASCI Scientific	
		commentary.	Simulations	
1			•Recommendations from Peer	
			Review Process	
			•Lessons Learned	
			•V&V Plan Review	
			•Software Engineering Practices	
			Mini-Software Process Assessment	
			Final Report—Questionnaire	·
			Summary Scoring Matrix	
			Scoring Sheet for V&V Plan	
			Content	
		· ·	•Quick-Look Feedback Score Sheet	
			Program Audit Report	
			Observations	
			Suggestions/ Recommendations	
			Peer Review Final Report-Written	
			Feedback	
			Peer Review Program Office	
			Report	
Requirements/	Admin or	Information content that states	Software Quality Engineering	V&V Plan is not requirements.
Procedures/	Tech	needs, conditions, policy, or	Goals, Principles, and Guidelines	1111
Processes		essential steps for achieving	•DoD Modeling and Simulation	
		something or complying with	Directives and Instructions	
		something. Indicates what future	ASCI Applications Software	
		action should be taken.	Quality Engineering Practices	
			SNL ASCI QE Practices and Work	
			Products	
			•FY00 Peer Review Process for	
			SNL ASC V&V Program	
			•Guidelines for Sandia V&V Plans	
			Scoring Sheet for V&V Plan	
			Content Review	
Guide/Manual	Admin or	Any kind of handbook or reference	•Programmer's Guide to the	A process definition is also
Outuc/ivianual	Tech	document that gives information or	_	requirements.
	1 0011	advice on how to do something.	•Help files	equicinonts.
		advice on now to do sometime.	•Guidelines for V&V Plans	
			•DoD Modeling and Simulation	
			Glossary	
			•ASCI Applications SQE Practices	
			•Peer Review Training	
			•Guidelines for Sandia ASCI V&V	
			Plans	

	T		1	
			•Level I Peer Review of V&V	
			Plans	
			•Implementation Plan	
			•RMS Guidelines	
			•SNL ASCI QE Practices and Work	
			Products	
			•Scoring Sheet	
Ouestionnaire	Admin or	Any kind of document that solicits	•V&V Audit Questionnaire	
	i .	1 *	•Code Team Questionnaire	
		<u> </u>	•Software Process Maturity	
		1	Questionnaire	

 ${\bf Table~10:~RMS~Keyword~Definitions~-}~{\it General~Area.}$

Value	Admin/ Tech	Definition	Examples	Comments
Administrative	Admin	Any information that deals with project management, risk management, finances or budgeting, personnel issues, or records management.	Thoughts on risk managementRMS GuidelinesProject status reportsBudget Templates	
Technical	Tech	Any scientific- or research- related information that directly supports the ASCI mission.	V&V Plan Peer Reviews Process Technical Journal article Stockpile Computing Guidelines Software Quality Engineering Practices Implementation of Stockpile Stewardship Requirements Traceability	
Assessment	Tech or Admin	Any kind of appraisal, evaluation or review to assess the nature, worth, or quality of products, finances, events, or processes, which may include recommendations or modifications.	 Peer Review Summaries Software Assessment Final Report Software Process Assessment GOMA V&V Plan Review Recommendations for a V&V Program Peer Review Quick Look Feedback 	
Admin Audit	Admin	A formal appraisal or examination of a program, project, or other administrative function.	•DOE Program Audit Report •ASCI Internal Financial Audit Report •DOE Stockpile Stewardship Program Review	

Code/ Project	Tech or	Any project-related information	•GOMA V&V Plan	
	Admin	about an ASCI Code, either	Application Programmer's Guide	
		technical or administrative in	to the ALEGRA framework	
		nature.	Program Feedback for SACCARA	
			and PRONTO/JAS	
			•V&V Plan Review for GOMA	
			Quick Look Feedback for	
			CALORE	
Guidance	Admin or	Any kind of information regarding	•DoD Directive, 5000.59	
Guidanee	Tech	leadership, supervision, counsel, or	I	
	reen		• Applications Software Engineering	
		cal areas.	Practices	
		car areas.	•RMS Guidelines	
			•General Principles for	
			Experimental Vaildation of ASCI	
			Code Applications	
			•PRONTO/JAS Final Peer Review	
Peer Review	Tech Only	An independent, technical		
	<u> </u>	examination by staff and	Report	
		management, either internal or	• Peer Review Guidelines	
		external, on any topic.	•Summary of Level I Peer Review	
			Process	
			•Tasking for the Level I Peer	
	ļ		Review	
V&V Peer	Tech Only	Independent peer review of V&V		
Review Level I		plan development and execution		
		with emphasis on programmatic		
		areas.		
V&V Peer	Tech Only	Independent peer review of V&V		
Review Level II	leen omy	plan development and execution		
Review Dever II		with emphasis on technical content		
V&V Peer	Tech Only	1		
Review Level		plan development and execution		
Ш		with emphasis on technical		
		performance.		
Project Manage	Admin	Administrative supervision of a	•Quarterly Report	
ment		project or program.	•Implementation Plan	
			ASCI Program Risks	
			•Action Plan for Improving Peer	
			Review Process	
			•Five-year plan	
Risk Man-	Admin	Identifying, analyzing, and	•ASCI Program Risks	
		mitigating risks.	•Risk Management Plan	
agement	1			
Records	Admin	Any kind of information dealing	•RMS Guidelines	
Management		with the creation, maintenance,	•RMS Help	<u> </u>

Stockpile	Tech	management, distribution, and disposition of records for ASCI V&V.	•RMS Problem Characterization & Requirements •Certainty in Stockpile Computing	
Computing		·		
Software Practices	Tech or Admin	Any kind of information that deals with software quality assurance, processes, or practices. Deals with creating and managing software products.	•ASCI Applications Software Quality Engineering Practices (tech) •Quarterly Reports for SQE Practices (admin)	RMS software is technical in nature. The records management portion of RMS is administrative.
Stockpile Stewardship	Tech	Information that pertains to managing the nuclear weapons stockpile.		
Tri-Lab	Admin or Tech	A document that pertains to integrated efforts or represents work of SNL, LLNL, and LANL.	 Fourth Biennial Tri-Laboratory Engineering Conference documents ASCI V&V Verification Workshop ASCI Software Quality Engineering: Goals, Principles, Guidelines 	
UQ	Tech	Uncertainty Quantification information.	 Prediction and Uncertainty in Computation Modeling Uncertainty in Computational Verification and Its Impact on Validation. 	
V&V	Admin or Tech	Any information related to ASCI Verification and Validation.	•V&V Plan	

Table 11: RMS Keyword Definitions - Publish Year and Funding Year.

Subject	Admin or Tech	Definition	Example Documents	Rules
Publish Year	n/a	The calendar year that the record/document was published or finalized.		If Document Category=Record, then Publish Year is mandatory. If Document Category=Document, then Publish Year is optional.
Funding Year	N/a	The fiscal year that the work was mainly paid for that resulted in the publication of the record/document.		Regardless of Document Category, this is optional.

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Table 12: RMS Keyword Definitions – *Training.*

Value	Admin or Tech	Definition	Example Documents	Rules
	Tech	overview, or essential reading or any training materials that explains what ASCI V&V is doing or how	Software Quality Engineering Practices V&V Peer Review Training Template Guidelines for V&V Plans - Content and Format	

Table 13: RMS Keyword Definitions – *Status*.

Value	Admin or Tech	Definition	Example Documents	Rules
Final	Admin or	Records/documents are final if		
	Tech	ready to be released for customer		
		use or published.		

Keyword Patterns

Table 14 is designed to ensure consistency in keyword assignment for the same types of records/documents. The RMS librarian shall reference this table first when assigning keywords.

Table 14: Keyword Patterns.

Document Subject		Assigned Keywords	
V&V Plans - DRAFT	L	GM=VV; CD=xxxx; DC=PLN; STAT=DRFT; US T; GN=GDNC; GN=TECH; GN=VV; SBGN=VA e); PBYR=xxxx; DT=D	
V&V Plans - FINAL	ASCI; SEPR; VandV; PRGM=VV; CD=xxxx; DC=PLN; DC=RPT; SBDC=SNDRPT; STAT=l USE=xxxx; FNDYR=xxxx; GN=CODE; GN=SWPRCT; GN=GDNC; GN=TECH; GN=VV; SBGN=VAL (if applicable); SBGN=VER (if applicable); PBYR=xxxx; DT=R		TECH; GN=VV;
Quick Look Feedback	ASCI; SEPR; VandV; PRGM=VV; CD=xxxx; DC=RSLT; DC=RPT (Scoresheets only); DC=RQ (Scoresheets only); STAT=FNL; FNDYR=xxxx; GN=CODE; GN=TECH; GN=PRVW; SBGN=PRVWx; PRx=xxx; GN=ASSMT; GN=VV; PBYR=xxxx; DT=x		
Quarterly Reports ASCI; SEPR; VandV; PRGM=VV; DC=RPT; SBDC=QRTRPT; STAT=FIGURE GN=ADMIN; GN=PRJMGMT; GN=VV; PBYR=xxxx; GN=xxxx (e.g. SW)			

20. Ramifications of Keywords, Hierarchy, or Interface Changes

When an additional RMS keyword is identified or an existing keyword needs to be modified, the RMS implementation team, including the RMS librarian, reviews and approves the suggested modifications. If approved, the following modifications shall be completed, if applicable, to thoroughly document the changes:

- Topic Search Definition spreadsheet, located in Version Manager (VM):
 PEARLS\RMS\Docs\RMSTopicSearchDefinitions.xls, for both the topic and attribute search definitions
- Topic Search hierarchy screen update, with changes taken from the modified spreadsheet
- Attribute Search screen
- Librarian Submittal Form
- User Submittal Form
- Assess if existing records/document need updating and update if necessary. The
 keywords can be manually updated record by record, or a mass update can be
 conducted by the WFS team. (Note: The completion date for the WFS mass update
 will vary according to the size of request and the WFS team's work load.)
- RMS Guidelines
- Help Files
- Update any affected code
- Update access control group(s)

Distribution:

1	0139	R. K. Thomas, 9904
3	0612	L. J. Cusimano, 96121
1	0638	D. E. Peercy, 12316
1	0824	J. L. Moya, 9130
1	0828	M. Pilch, 9133
1	0833	R. J. Hunter, 9103
20	0833	C. L. Northrop-Salazar, 9103
1	0899	E. C. Moser, 9616
1	1137	L. C. Claussen, 6536
20	1137	S. M. Eaton, 6536
1	1137	G. K. Froehlich, 6536
1	1137	A. L. Hodges, 6536
1	1137	M. T. McCornack, 6536
1	1137	D. L. Moore, 6536
1	1137	M. A. Tebo, 6536
1	9018	Central Technical Files, 8945-1
2	0899	Technical Library, 9616
1	0612	Review & Approval Desk, 9612
		For DOE/OSTI